

Claims:-

1. A PT-NANBH viral polypeptide comprising an antigen having an amino acid sequence that is at least 90% homologous with the amino acid sequence set forth in SEQ ID NO: 3,4,5,18,19,20,21 or 22, or an antigenic fragment thereof.
2. A PT-NANBH viral polypeptide according to claim 1, in which the amino acid sequence is at least 90% homologous with the amino acid sequence set forth in SEQ ID NO: 3, 4, or 5, or is an antigenic fragment thereof.
3. A PT-NANBH viral polypeptide according to claim 2, in which the amino acid sequence is at least 90% homologous with the amino acid sequence set forth in SEQ ID NO: 3 or 4, or is an antigenic fragment thereof.
4. A PT-NANBH viral polypeptide according to claim 2, in which the amino acid sequence is at least 90% homologous with the amino acid sequence set forth in SEQ ID NO: 5, or is an antigenic fragment thereof.
5. A PT-NANBH viral polypeptide according to any one of the preceding claims, in which the amino acid sequence is at least 95% homologous with the amino acid sequence set forth in the SEQ ID NO., or is an antigenic fragment thereof.
6. A PT-NANBH viral polypeptide according to claim 5, in which the amino acid sequence is at least 98% homologous with the amino acid sequence set forth in the SEQ ID NO., or is an antigenic fragment thereof.
7. A PT-NANBH viral polypeptide comprising an antigen from the structural coding region of the viral genome and an antigen from the non-structural coding region of the viral genome.

8. A PT-NANBH viral polypeptide according to claim 7, in which the antigen from the structural coding region has an amino acid sequence that is at least 90% homologous with the amino acid sequence set forth in SEQ ID NO : 5, or an antigenic fragment thereof, and the antigen from the non-structural coding region has an amino acid sequence that is at least 90% homologous with the amino acid sequence set forth in SEQ ID NO : 3 or 4, or an antigenic fragment thereof.
9. A DNA sequence encoding a PT-NANBH viral polypeptide according to any one of claims 1 to 8.
10. A DNA sequence according to claim 9 as set forth in SEQ ID NO: 3, 4, 5, 18, 19, 20, 21 or 22.
11. An expression vector containing a DNA sequence, according to either of claims 9 and 10, and being capable in an appropriate host of expressing the DNA sequence to produce a PT-NANBH viral polypeptide.
12. An host cell transformed with an expression vector according to claim 11.
13. A process for preparing PT-NANBH viral polypeptide which comprises cloning, or synthesising a DNA sequence encoding PT-NANBH viral polypeptide according to any one of claims 1 to 8, inserting the DNA sequence into an expression vector such that it is capable in an appropriate host of being expressed, transforming an host cell with the expression vector, culturing the transformed host cell, and isolating the viral polypeptide.
14. A polyclonal or monoclonal antibody against a PT-NANBH viral polypeptide, according to any one of claims 1 to 6.

15. A method for the detection of PT-NANBH viral nucleic acid, which comprises:

- i) hybridising viral RNA present in a test sample, or cDNA synthesised from such RNA, with a DNA sequence corresponding to SEQ ID NO: 3, 4, 5, 18, 19, 20, 21 or 22, and screening the resulting nucleic acid hybrids to identify any PT-NANBH viral nucleic acid; or
- ii) synthesising cDNA from viral RNA present in a test sample, amplifying a preselected DNA sequence corresponding to a subsequence of the SEQ ID NO: 3, 4, 5, 18, 19, 20, 21 or 22, and identifying the preselected DNA sequence.

16. A test kit for the detection of PT-NANBH viral nucleic acid, which comprises:

- i) a pair of oligonucleotide primers one of which corresponds to a portion of the nucleotide sequence of SEQ ID NO: 3,4,5,18,19,20,21 or 22 and the other of which is located to the 3' side of the first and corresponds to a portion of the complementary sequence, the pair defining between them a preselected DNA sequence;
- ii) a reverse transcriptase enzyme for the synthesis of cDNA from test sample RNA upstream of the primer corresponding to the complementary nucleotide sequence of SEQ ID NO: 3,4,5,18,19,20,21 or 22;
- iii) an enzyme capable of amplifying the preselected DNA sequence; and optionally
- iv) washing solutions and reaction buffers.

17. A method for the detection of PT-NANBH viral antigen or viral antibody, which comprises contacting a test sample with a PT-NANBH viral polypeptide according to any of claims 1 to 8, or a polyclonal or monoclonal antibody according to claim 14, and determining whether there is any antigen-antibody binding contained within the test sample.
18. A test kit for the detection of PT-NANBH viral antigen or viral antibody, which comprises a PT-NANBH viral polypeptide according to any of claims 1 to 8, or a polyclonal or monoclonal antibody according to claim 14, and means for determining whether there is any antigen-antibody binding contained within the test sample.
19. A vaccine formulation which comprises a PT-NANBH viral polypeptide according to any of claims 1 to 8, in association with a pharmaceutically acceptable carrier.
20. A method for inducing immunity in man to PT-NANBH, which comprises the administration of an effective amount of a vaccine formulation according to claim 19.

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